SCAG Arterial Speed Study
Phase 2

Work Plan & Progress Review

Objectives

- Improve modeling of volume/delay
- Build on work from Phase 1
- Collect new arterial data
- Incorporate ATSAC data where available
- Develop and test new volume/delay functions

Responsibilities

- SCAG
  - Project oversight
  - Data from network inventory & model
  - Liaison with local agencies
  - Model validation runs
- Dowling
  - Sampling plan
  - Data collection
  - Model development
  - Model implementation
  - Training

Tasks

1. Survey plan
2. Speed surveys
3. Data analysis
4. ATSAC speed data
5. Arterial VDF
6. Freeway VDF
7. Model validation
8. Truck speeds
9. Final report
10. Training
11. Meetings

Task 1. Arterial speed survey plan (1)

- Add to Phase 1 data
- Proportional sampling of arterials
- Identify sites outside City of LA
- Specify:
  - Quality control measures
  - Safety measures
  - Survey standards

Task 1. Arterial speed survey plan (2)

- 24 sites selected
- < 2 mi long; 1 RT every 15 min
- Sites distributed in proportion to VMT

Imperial	**1**
Los Angeles	**6**
Orange	**5**
Riverside	**4**
San Bernardino	**4**
Ventura	**4**

Task 2. Arterial speed surveys (1)

- 24 arterial sites: street segment between 2 signals
- Hourly machine counts for 24 hrs.
- Floating car runs from 2 PM – 6 PM
- GPS units on cars
- Daily quality control checks on data

Task 2. Arterial speed surveys (2)

- Surveys conducted 29 April – 14 May
- Traffic count data received from Wiltec
- Speed data received from Jacobs-Carter-Burgess

Task 3. Data summary & analysis (1)

- Enter data into database
  - Speed data (Task 2)
  - ATSAC data (Task 4)
  - PeMS data (Task 6)
- Summarize data by attributes:
  - Facility type
  - Area type
  - County

Task 3. Data summary & analysis (2)

- Data format tech memo sent to SCAG
- Developing database that can be converted into other formats

Task 4. ATSAC speed data

- Speed and count data from ATSAC (LA)
- Incorporate into database

Task 5. Revise arterial VDF

- Review & evaluate other VDFs - completed
- Review current SCAG network
- Develop updated VDFs
- Implement VDFs in TransCAD
- Evaluate results of SCAG model runs

Task 6. Revise freeway VDF (1)

- Collect PeMS data
- Filter out bad data
- Develop updated VDFs
- Implement VDFs in TransCAD
- Evaluate results of SCAG model runs

Task 6. Revise freeway VDF (2)

- PeMS data collected
  - April – September 2007
  - Screened out data with < 75% observed
  - 1,918 mainline stations
  - 3.8 million hourly speed & flow observations from
- Data aggregated into 4 SCAG time periods
- 150,000 – 160,000 observations/period

Task 7. Model validation

- Review validation criteria
- Evaluate results of SCAG model runs
- Fine-tune VDFs
- Model validation runs to be done by SCAG after implementation of new network

Task 8. Truck speeds post-processor

- Ensure truck speeds consistent with results of new VDFs
- Review data from CARB and PeMS truck travel time data sets
- Recommend possible improvements

Task 9. Final report, acceptance test

- Final report
  - Study method
  - Data collection
  - Model results
- Prepare research paper with SCAG

Task 10. Training

- Train SCAG & other agency staff
  - ATSAC data retrieval & extraction
  - Other intersection monitoring devices
- Technical memorandum
- Teleconference with SCAG/agency staff

Task 11. Meetings, progress reports

- Review work program (completed)
- Revised work plan (completed)
- Meetings with TRC
- Presentations to SCAG MTF
- Monthly progress reports

Project schedule